

CLMPTO

12/28/04

CM.

1. (currently amended) A method of forming an insulator having a main component of silicon dioxide by a chemical vapor deposition method, wherein at least one kind of organic substance including benzene nucleuses is used as a benzene nucleus source so that said insulator includes said benzene nucleuses,

wherein said chemical vapor deposition method is carried out by maintaining a temperature of not less than about 500°C so as to cause elimination reaction of said benzene nucleuses at the same time of deposition of said insulator, thereby to form said insulator including pores.

2. (original) The method as claimed in claim 1, wherein said benzene nucleus has a bonding structure with silicon atoms.

3. (original) The method as claimed in claim 2, wherein at least one selected from the group consisting of phenyltrimethylsilane and phenyltrimethoxysilane is used as said benzene nucleus source.

4. (original) The method as claimed in claim 2, wherein said organic substance as said benzene nucleus source is used together with a silicon source material.

5. (original) The method as claimed in claim 2, wherein said organic substance as said benzene nucleus source is used alone without any silicon source material.

6. (original) The method as claimed in claim 1, wherein said benzene nucleus is free of a bonding structure with silicon atoms and said organic substance as said benzene nucleus source is used together with a silicon source material.

7. (original) The method as claimed in claim 6, wherein said organic substance has a structure of a single benzene nucleus.

8. (original) The method as claimed in claim 7, wherein said organic substance comprises at least one selected from the group consisting of toluene, benzene and xylene.

9. (original) The method as claimed in claim 6, wherein said organic substance has a structure of a plurality of benzene nucleuses.

10. (original) The method as claimed in claim 9, wherein said organic substance comprises at least one selected from the group consisting of naphthalene, biphenyl and anthracene.

11. (original) The method as claimed in claim 1, wherein said chemical vapor deposition method is a plasma chemical vapor deposition method.

12. (original) The method as claimed in claim 1, wherein said chemical vapor deposition method is a low pressure chemical vapor deposition method.

13. (currently amended) ~~The method as claimed in claim~~
± A method of forming an insulator having a main component of
silicon dioxide by a chemical vapor deposition method, wherein at
least one kind of organic substance including benzene nucleuses
is used as a benzene nucleus source so that said insulator
includes said benzene nucleuses,

wherein after said insulator has been formed by said chemical vapor deposition method, then said benzene nucleuses are removed from said insulator thereby to form pores in said insulator, and

wherein said benzene nucleuses are removed by causing a
combustion reaction in an oxygen atmosphere.

14. (currently amended) ~~The method as claimed in claim~~
~~13~~ A method of forming an insulator having a main component of
silicon dioxide by a chemical vapor deposition method, wherein at
least one kind of organic substance including benzene nucleuses
is used as a benzene nucleus source so that said insulator
includes said benzene nucleuses,

wherein after said insulator has been formed by said
chemical vapor deposition method, then said benzene nucleuses are
removed from said insulator thereby to form pores in said
insulator,

wherein said benzene nucleuses are removed by causing an
elimination reaction for eliminating benzene nucleuses from said
insulator, and

wherein said elimination reaction is caused by exposure
to oxygen radicals generated in a plasma.

CLAIM 15. (CANCELLED)

16. (original) The method as claimed in claim 14, wherein said elimination reaction is caused by a heat treatment in a vacuum at a temperature of not less than 450°C.

17. (original) The method as claimed in claim 14, wherein said elimination reaction is caused by a heat treatment in an inert gas atmosphere at a temperature of not less than 450°C.

CLAIMS 18-19. (CANCELLED)

CLAIMS 20-38. (CANCELLED)